



PATENT

Present Attorney Docket No. 213839-00003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant: McCafferty, *et al.*
Serial No.: 09/196,673
Filed: November 20, 1998
Title: Methods for Producing
Members of Specific Binding
Pairs
Group Art
Unit: 1627
Examiner: P. Ponnaluri

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**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 C.F.R. §§ 1.56, 1.97 and 1.98**

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

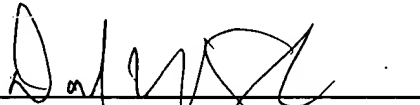
In accordance with 37 C.F.R. § 1.97 and the continuing duty of disclosure under 37 C.F.R. § 1.56, the applicants call to the attention of the Examiner references listed on the attached Forms PTO/SB/08A and PTO/SB/08B. Applicants request that the references be made of official record in the above-identified application and considered by the Examiner. A copy of each listed reference is enclosed herewith.

Each reference filed in the Information Disclosure Statement was first cited to us in communication from a foreign patent office less than three months prior to the filing.

The Information Disclosure Statement is not intended to be an admission that a search has been made, that other relevant art does not exist, or that any of the information disclosed herein constitutes art under 35 U.S.C. §102 or §103.

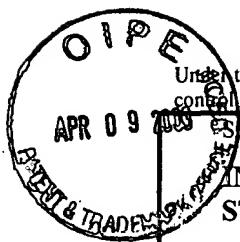
This Information Disclosure Statement is submitted under 37 CFR 1.97(d) and is accompanied by a check for \$180 as prescribed by 37 CFR 1.17(p). The Commissioner is hereby authorized to charge any additional fees which may be required in this application under 37 C.F.R. §§1.16-1.17 during its entire pendency, or credit any overpayment, to Deposit Account No. 50-1214. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-1214.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'David W. Clough', is written over a horizontal line.

David W. Clough, Ph.D.,
Registration No. 36,107
Attorney for Applicant

April 9, 2003
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 6

Complete if Known

Application Number	09/196,673
Filing Date	November 20, 1998
First Named Inventor	McCafferty
Group Art Unit	1627
Examiner Name	P. Ponnaluri
Attorney Docket Number	213839-00003

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number Number - Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	US patent application 07/240,160	03-22-1990	Ladner et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
	B1	WO 88/01649	03-10-1988	Ladner et al.		
	B2	GB9022845.3	10-19-1990	Medical Research Council		
	B3	GB9024503.6 patent application	11-12-1990	O'Brien		
	B4	GB 9104744.9 patent application	03-06-1991	O'Brien		
	B5	EP-A-0 368 684	05-16-1990	Winter		
	B6	GB9015198.6 priority document	07-10-1990	O'Brien		
	B7	GB 9022845.3 priority document	10-19-1990	Medical Research Council		
	B8	GB 9104744.9 priority document	03-06-1991	O'Brien		
	B9	GB9110549.4 priority document	05-15-1991	O'Brien		
	B10	EP-B-0 349 578 B1	11-30-1994	Ladner et al.		
Examiner Signature		Date Considered				

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds codes of USPTO Patent Documents as www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 6

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Group Art Unit	1627
Examiner Name	P. Ponnaluri
Attorney Docket Number	213839-00003

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher city and/or country where published	T ²
	C1	Opposition to European patent EP-B-0589877, cited opposition document D2: Nelson et al. "Filamentous phage DNA cloning vectors: a noninfective mutant with a nonpolar deletion in gene III" , <i>Virology</i> 108: 338-350 (1981)	
	C2	Opposition to European patent EP-B-0589877, cited opposition document D3: McCoy and Khorana "Introduction and characterization of amber mutations in the bacteriorhodopsin gene" , <i>J. Bio. Chem.</i> 258: 8456-8461 (1983)	
	C3	Opposition to European patent EP-B-0589877, cited opposition document D5: Bullock et al. "XL1-blue: a high efficiency plasmid transforming recA Escherichia coli strain with beta-galactosidase selection" , <i>Bio Techniques</i> 5: 376-378 (1987)	
	C4	Opposition to European patent EP-B-0589877, cited opposition document D6: Schnee et al. "Construction and expression of a recombinant antibody-targeted plasminogen activator" , <i>Proc. Natl. Acad. Sci. USA</i> 84:6904-6908 (1987)	
	C5	Opposition to European patent EP-B-0589877, cited opposition document D9: De La Cruz et al. "Immunogenicity and epitope mapping of foreign sequences via genetically engineered filamentous phage" , <i>J. Bio. Chem.</i> 263: 4318-4322 (1988)	
	C6	Opposition to European patent EP-B-0589877, cited opposition document D15: Parmley and Smith "Filamentous fusion phage cloning vectors for the study of epitopes and design of vaccines" , <i>Adv. Exp. Med. Biol.</i> 251: 215-218 (1989)	
	C7	Opposition to European patent EP-B-0589877, cited opposition document D18: Chaudhary et al. "A recombinant immunotoxin consisting of two antibody variable domains fused to Pseudomonas exotoxin" , <i>Nature</i> 339: 394-397 (1989)	

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Signature

Date
Considered

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Sheet 3 of 6

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Application Number	09/196,673
Filing Date	November 20, 1998
First Named Inventor	McCafferty
Group Art Unit	1627
Examiner Name	P. Ponnaluri
Attorney Docket Number	213839-00003

C8	Opposition to European patent EP-B-0589877, cited opposition document D23: US 517 659 "Affymax priority document", entitled "Recombinant Library Screening Methods", priority document filed 1 May 1990 for EP-A-0 527 839 (Article 54(3) EPC)
C9	Opposition to European patent EP-B-0589877, cited opposition document D26: Scott and Smith "Searching for peptide ligands with an epitope library", <i>Science</i> 249: 386-389 (1990)
C10	Opposition to European patent EP-B-0589877, cited opposition document D27: Devlin et al. "Random peptide libraries: a source of specific protein binding molecules", <i>Science</i> 249: 404-405 (1990)
C11	Opposition to European patent EP-B-0589877, cited opposition document D37: Markland et al. "Design, construction and function of a multicopy display vector using fusions to the major coat protein of bacteriophage M13", <i>Gene</i> 109: 13-19 (1991)
C12	Opposition to European patent EP-B-0589877, cited opposition document D38: Roberts et al. "Directed evolution of a protein: selection of potent neutrophil elastase inhibitors displayed on M13 fusion phage", <i>Proc. Natl. Acad. Sci. USA</i> 89: 2429-2433 (1992)
C13	Opposition to European patent EP-B-0589877, cited opposition document D39: Glockshuber et al. "The disulfide bonds in antibody variable domains: effects on stability, folding in vitro, and functional expression in <i>Escherichia coli</i> ", <i>Biochemistry</i> 31: 1270-1279 (1992)
C14	Opposition to European patent EP-B-0589877, cited opposition document D41: Kay et al. "Phage display of peptides and proteins", A laboratory Manual (1996) (Cover page and Foreward enclosed)
C15	Opposition to European patent EP-B-0589877, cited opposition document D42: Proba et al. "A natural antibody missing a cysteine in V _H : consequences for thermodynamic stability and folding", <i>J. Mol. Biol.</i> 265: 161-172 (1997)
C16	Opposition to European patent EP-B-0589877, cited opposition document D43: Proba et al. "Antibody scFv fragments without disulfide bonds made by molecular evolution", <i>J. Mol. Biol.</i> 275: 245-253 (1998)

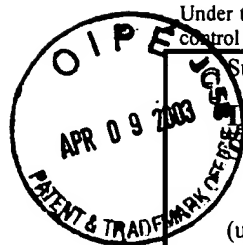
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Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/196,673
		Filing Date	November 20, 1999
		First Named Inventor	McCafferty
		Group Art Unit	1627
		Examiner Name	P. Ponnaluri
		Attorney Docket Number	213839-00003
Sheet	4	of	6

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C17	Opposition to European patent EP-B-0589877, cited opposition document D44: Letter of 18 November 1992 to EPO from Kilburn Strode in prosecution of EP-B-0 349 578	
C18	Opposition to European patent EP-B-0589877, cited opposition document D45: Page 3 of EPO letter of 19 October 1993 addressed to Plougmann, Ole (c/o Plougmann Vingtoft A/S) in prosecution of EP-B-0 768 377	
C19	Opposition to European patent EP-B-0589877, cited opposition document D46: Letter of 22 September 1994 to EPO from Plougmann & Vingtoft in prosecution of EP-B-0 768 377	
C20	Opposition to European patent EP-B-0589877, cited opposition document D47: Extract from OD Decision in opposition proceedings against EP-B-0 201 184, (1995)	
C21	Opposition to European patent EP-B-0589877, cited opposition document D48: Letter of 14 February 1996 to EPO from Hepworth, Lawrence, Bryer & Bizley in prosecution of EP-A-0 527 839, 1996	
C22	Opposition to European patent EP-B-0589877, cited opposition document D49: the Boards of Appeal of the European Patent Office decision of 8 May 1996, case number T694/92 – 3.3.4	
C23	Opposition to European patent EP-B-0589877, cited opposition document D50: Extract from opposition proceeding against EP-B-0 349 578 (1996)	
C24	Opposition to European patent EP-B-0589877, cited opposition document D51: Extract from OD Decision in proceedings against EP-B-0 349 578 (1998)	
C25	Opposition to European patent EP-B-0589877, cited opposition document D53: Declaration of professor sir Aaron Klug, Ph.D. with exhibits, (23 June 1998)	
C26	Opposition to European patent EP-B-0589877, cited opposition document D54: preprint of paper by Scott and Smith submitted to Science	
C27	Opposition to European patent EP-B-0589877, cited opposition document D55: Smith grant application	

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Sheet 5 of 6

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Application Number	09/196,673
Filing Date	November 20, 1998
First Named Inventor	McCafferty
Group Art Unit	1627
Examiner Name	P. Ponnaluri
Attorney Docket Number	213839-00003

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C28	Opposition to European patent EP-B-0589877, late filed document D56: claim for infringement of 24 September 1998, from Cambridge Antibody Technology Limited to EPO	
C29		
C30	Opposition to European patent EP-B-0589877, late filed document D58: McConnell et al. "Constrained peptide libraries as a tool for finding mimotopes" , <i>Gene</i> 151: 115-118 (1994).	
C31	Opposition to European patent EP-B-0589877, late filed document D59: two chapters of "Lambda II" (eds. Hendrix et al.) Cold Spring Harbour Laboratory, Cold Spring Harbour, New York, 1983: "A Beginner's Guide to Lambda Biology" (Arber) (pp. 381-395) and "Tail Assembly and Injection" (Katsura)(pp. 331-346).	
C32	Opposition to European patent EP-B-0589877, late filed document D60: Parmley & Smith "Filamentous fusion phage cloning vectors for the study of epitopes and design vaccines" , <i>Adv. Exp. Med. Biol.</i> 251: 251-8 (1989).	
C33	Opposition to European patent EP-B-0589877, late filed document D63: Declaration of William D. Huse, MD, Ph.D. (17 August 1999)	
C34	Opposition to European patent EP-B-0589877, late filed document D66: Crissman & Smith, "Gene-III protein of filamentous phages: evidence for a carboxyl-terminal domain with a role in morphogenesis" , <i>Virology</i> 132: 445-455 (1994).	
C35	Opposition to European patent EP-B-0589877, late filed document D67: Declaration of Dr. Viia Valge-Archer (3 May, 2000)	
C36	Opposition to European patent EP-B-0589877, late filed document D68: Declaration of Dr. Hiroshi Ueda (3 May, 2000)	
C37	Opposition to European patent EP-B-0589877, late filed document D69: First Declaration of Dr. Rachel B. Kent (4 February, 2000).	
C38	Opposition to European patent EP-B-0589877, late filed document D71: letter of patentees filed at USPTO on 16 July 1996.	
C39	Opposition to European patent EP-B-0589877, late filed document D72: letter of patentees filed at USPTO on 6 March 1997.	

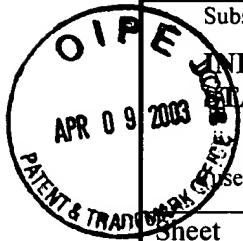
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Sheet 6 of 6

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C40	Opposition to European patent EP-B-0589877, late filed document D73: Opposition by CAT against EP-B-0 564 531.	
C41	Opposition to European patent EP-B-0589877, late filed document D74: Decision of EPOD on EP-B-0 201 184.	
C42	Opposition to European patent EP-B-0589877, late filed document D75: Declaration of Prof. Andreas Plückhun (3 May, 2000).	
C43	Opposition to European patent EP-B-0589877, late filed document D76: Notice of grant awarded to Smith grant application.	
C44	Opposition to European patent EP-B-0589877, late filed document D77: Endemann and Model "Location of filamentous phage minor coat proteins in phage and in infected cells", <i>J. Mol. Biol.</i> 250: 496-506 (1995). The document was objected to by patentees.	
C45	Opposition to European patent EP-B-0589877, late filed document D79: Extract from MorphoSys website.	
C46	Opposition to European patent EP-B-0589877, late filed document D80: Written Decision dated 26 May 2000 to revoke EP-B-0436597.	
C47	Opposition to European patent EP-B-0589877, late filed document D81: 2nd Declaration of Dr. Viia Valge-Archer (31 May, 2000).	
C48	Letter of Dr. Smith Re: NIH grant proposals. Dated June 27, 1997	

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